104. The optical communication system as claimed in claim 103,

wherein the difference in wavenumber between the pump light emitted from said third laser source and that emitted from said first laser source is 42-166cm^{-1},

the difference in wavenumber between the pump light emitted from said first laser source and that emitted from said second laser source is 125-290cm^{-1}, and

the difference in wavenumber between the pump light emitted from said first laser source and that emitted from said fourth laser source is 42-290cm^{-1}.

105. The optical communication system as claimed in claim 103,

wherein the difference in wavenumber between the pump light emitted from said fourth laser source and that emitted from said first laser source is 42-166cm^{-1},

the difference in wavenumber between the pump light emitted from said first laser source and that emitted from said second laser source is 125-290cm^{-1}, and

the difference in wavenumber between the pump light emitted from said first laser source and that emitted from said third laser source is 42-290cm^{-1}.

106. The optical communication system as claimed in claim 103, further comprising a fifth laser source for pumping said second silica fiber, wherein the pump light beams emitted from said fifth and third laser sources have the same wavelength.

107. The optical communication system as claimed in claim 103, wherein said repeater further comprises a second tellurite fiber, and said first tellurite fiber, first silica fiber and second tellurite fiber are connected in series in this order in said repeater.

REMARKS

By this amendment, Applicant amended claims 4-8, 10, 12, 15, 16, 18-20, 25, 26, 34, 40-44, 47, 49-52, 55, 57-61, 64-71, 73-76, 78, 79, 83, 85-88, 90, 93, 95, 96, 101-103, 106 and 107 as filed in the priority Japanese application in order to avoid multiple dependency. In making these revisions care has been taken to ensure that the claims remain supported by the specification and that no new matter has been added.

The Commissioner is hereby authorized to charge any additional fees which may be required in this application under 37 C.F.R. §§1.16-1.17 during its entire pendency, or credit any overpayment, to Deposit Account No. 06-1135. Should no proper payment be enclosed

herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1135.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

4. (Amended) The optical fiber amplifier as claimed in claim [2] 3, further comprising a coupler that combines the pump light beams emitted from said three or more laser sources.

5. (Amended) The optical fiber amplifier as claimed in claim 1 [or 3], wherein said tellurite fiber is a dispersion compensating fiber.

6. (Amended) The optical fiber amplifier as claimed in claim 1 [or 3], further comprising a gain equalizer installed in [the] downstream stage of said tellurite fiber in [the incidnet] incident direction of signal light.

7. (Amended) An optical fiber amplifier comprising:

two laser sources emitting pump light beams of wavelengths different from each other; and

a first tellurite fiber and a second tellurite fiber[s] pumped with the pump light emitted from said two laser sources;

wherein the absolute difference in wavenumber between said pump light beams emitted from the two laser sources is 125-290cm^{-1}.

8. (Amended) The optical fiber amplifier as claimed in claim 7, wherein said first tellurite fiber and second tellurite fiber[s] are connected in series.

10. (Amended) The optical fiber amplifier as claimed in claim 7 [or 8], further comprising:

a coupler that combines the pump light beams emitted from said two laser sources; and

a splitter that splits [the] an output light from said coupler into input light branches to be provided for said first tellurite fiber and second tellurite fiber[s].

12. (Amended) The optical fiber amplifier as claimed in claim 7 [or 11], wherein at least one of said first tellurite fiber [or] and said second tellurite fiber is a dispersion compensating fiber.

15. (Amended) The optical fiber amplifier as claimed in claim 13 [or 14], wherein said tellurite fiber and said silica fiber are connected in series.

16. (Amended) The optical fiber amplifier as claimed in claim 15, wherein said tellurite fiber is installed upstream in [the] incident direction of signal light.

18. (Amended) The optical fiber amplifier as claimed in claim 13 [or 14], wherein said tellurite fiber is a dispersion compensating fiber.

19. (Amended) The optical fiber amplifier as claimed in claim 13 [or 14], wherein said silica fiber is a dispersion compensating fiber.

20. (Amended) The optical fiber amplifier as claimed in claim 13 [or 14], further comprising a coupler that combines the pump light emitted from said first laser source and that from said second laser source.

25. (Amended) The optical fiber amplifier as claimed in claim [20; wherein said tellurite fiber and said silica fiber are connected in series, said tellurite fiber is installed upstream in the incidnet direction of signal light, and] 22, further comprising a reflector [that reflects the pump light emitted from said first laser source is] installed between said tellurite fiber and said silica fiber to reflect the pump light emitted from said first laser source.

26. (Amended) The optical fiber amplifier as claimed in claim [20; wherein said tellurite fiber and said silica fiber are connected in series, said tellurite fiber is installed upstream in the incident direction of signal light, and] 22, further comprising a reflector [that reflects the pump light emitted from said second laser source is] installed between said tellurite fiber and said silica fiber to reflect the pump light emitted from said second laser source.

34. (Amended) The optical fiber amplifier as claimed in claim 31, wherein said tellurite fiber is installed in [the] a most upstream stage of [the incidnent] incident direction of signal light.

40. (Amended) The optical fiber amplifier as claimed in claim 38 [or 39], wherein said tellurite fiber and said silica fiber are connected in series.

41. (Amended) The optical fiber amplifier as claimed in claim 40, wherein said tellurite fiber is installed upstream in [the incidnet] incident direction of signal light.

42. (Amended) The optical fiber amplifier as claimed in claim 38 [or 39], further comprising a coupler that combines [the] pump light emitted from said second laser source and [that] pump light from said third laser source.

43. (Amended) The optical fiber amplifier as claimed in claim 38 [or 39], wherein said tellurite fiber is a dispersion compensating fiber.

44. (Amended) The optical fiber amplifier as claimed in claim 38 [or 39], wherein said silica fiber is a dispersion compensating fiber.

47. (Amended) The optical fiber amplifier as claimed in claim 45 [or 46], wherein said tellurite fiber and said silica fiber are connected in series.

49. (Amended) The optical fiber amplifier as claimed in claim 45 [or 46], further comprising a coupler that combines [the] pump light emitted from said first laser source and [that] pump light from said second laser source.

50. (Amended) The optical fiber amplifier as claimed in claim 45 [or 46], wherein said tellurite fiber is a dispersion compensating fiber.

51. (Amended) The optical fiber amplifier as claimed in claim 45 [or 46], wherein said silica fiber is a dispersion compensating fiber.

52. (Amended) The optical fiber amplifier as claimed in claim 45 [or 46], wherein, $\lambda 1$ and $\lambda 2$ being wavelengths of pump light emitted from said first and said second laser sources, ($\lambda 1 > \lambda 2$), at [the gain] peaks of gain spectrum provided by [the] pumping with only the pump light emitted from said first laser source, the ratio between [the] an on-off Raman gain of said tellurite fiber (in dB values) at $\lambda 1$ [of said tellurite fiber] and that at $\lambda 2$ lies between 100:80 and 100:100 when the tellurite fiber is pumped with the pump light beams emitted from said first and second laser sources.

55. (Amended) The optical fiber amplifier as claimed in claim 53 [or 54], wherein said tellurite fiber and said silica fiber are connected in series.

57. (Amended) The optical fiber amplifier as claimed in claim 53 [or 54], further comprising a coupler that combines the pump light emitted from said first laser source and that from said second laser source.

58. (Amended) The optical fiber amplifier as claimed in claim 53 [or 54], further comprising a coupler that combines the pump light emitted from said third laser source and that from said fourth laser source.

59. (Amended) The optical fiber amplifier as claimed in claim 53 [or 54], wherein said tellurite fiber is a dispersion compensating fiber.

60. (Ameded) The optical fiber amplifier as claimed in claim 53 [or 54], wherein said silica fiber is a dispersion compensating fiber.

61. (Amended) The optical fiber amplifier as claimed in claim 53 [or 54], wherein, $\lambda 1$ and $\lambda 2$ being wavelengths of pump light emitted from said first and said second laser sources ($\lambda 1 > \lambda 2$), at [the] gain peaks provided by [the] pumping with only the pump light emitted from said first laser source, the ratio between [the] an on-off Raman gain of said tellurite fiber(in dB values) at $\lambda 1$ [of said tellurite fiber] and that at $\lambda 2$ lies between 100:80 and 100:100 when the tellurite fiber is pumped with the pump light beams emitted from said first and second laser sources.

64. (Amended) The optical fiber amplifier as claimed in claim [62 or] 63, wherein the pump light beams emitted from said fifth and first laser sources have the same wavelength and the pump light beams emitted from said sixth and second laser sources have the same wavelength.

65. (Amended) The optical fiber amplifier as claimed in claim 62 [or 63], wherein said first tellurite fiber, said silica fiber and said second tellurite fiber are connected in series in this order.

66. (Amended) The optical fiber amplifier as claimed in claim 62 [or 63], further comprising a coupler that combines [the] pump light emitted from said first laser source and [that] pump light emitted from said second laser source.

67. (Amended) The optical fiber amplifier as claimed in claim 62 [or 63], further comprising a coupler that combines [the] pump light emitted from said third laser source and [that] pump light emitted from said fourth laser source.

68. (Amended) The optical fiber amplifier as claimed in claim 62 [or 63], further comprising a coupler that combines [the] pump light emitted from said fifth laser source and [that] pump light emitted from said sixth laser source.

69. (Amended) The optical fiber amplifier as claimed in claim 62 [or 63], wherein [either] at least one of said first tellurite fiber [or] and second tellurite fiber is a dispersion compensating fiber [or both of said first and second tellurite fibers are dispersion compensating fibers].

70. (Amended) The optical fiber amplifier as claimed in claim 62 [or 63], wherein said silica fiber is a dispersion compensating fiber.

71. (Amended) An optical fiber amplifier comprising:

first and second laser sources emitting pump light beams of wavelengths different from each other; [and]

a tellurite fiber; and

an Erbium-doped fiber.

73. (Amended) The optical fiber amplifier as claimed in claim 71 [or 72], wherein said tellurite fiber and said Erbium-doped fiber are connected in series.

74. (Amended) The optical fiber amplifier as claimed in claim 73, wherein said tellurite fiber is installed upstream in [the incidnet] incident direction of signal light.

75. (Amended) The optical fiber amplifier as claimed in claim 71 [or 72], wherein said tellurite fiber is a dispersion compensating fiber.

76. (Amended) An optical fiber amplifier comprising:

first and second laser sources;

a tellurite fiber pumped with [the] a pump light emitted from said first laser source;

a wavelength-selective splitter [that splits the] to split a signal light amplified in said tellurite fiber into a signal light output[s] of a first wavelength region and a signal light output of a second wavelength region[s];

a Thulium-doped fiber that is pumped with [the] a pump light emitted from said second laser source [and amplifys] to amplify the signal light output of the first wavelength region; and

a coupler [that combines] to combine the signal light output of the first wavelength region amplified in said Thulium-doped fiber and the signal light output of the second wavelength region.

78. (Amended) The optical fiber amplifier as claimed in claim 76 [or 77], wherein said tellurite fiber is a dispersion compensating fiber.

79. (Amended) The optical fiber amplifier as claimed in claim 76 [or 77], further comprising a third laser source and a silica fiber pumped with [the] a pump light emitted from said third laser source, wherein the signal light output of said second wavelength region is amplified in said silica fiber.

83. (Amended) An optical fiber amplifier comprising:

first [to] laser source, second laser source, and third laser source[s];

a tellurite fiber pumped with [the] a pump light emitted from said first laser source;

a Thulium-doped fiber pumped with [the] a pump light emitted from said second laser source;

a silica fiber pumped with [the] a pump light emitted from said third laser source;

wherein said tellurite fiber, Thulium-doped fiber and silica fiber are connected in series in this order.

85. (Amended) The optical fiber amplifier as claimed in claim 83 [or 84], wherein said Thulium-doped fiber is a Thulium-doped fluoride fiber.

86. (Amended) The optical fiber amplifier as claimed in claim 83 [or 84], wherein said tellurite fiber is a dispersion compensating fiber.

87. (Amended) The optical fiber amplifier as claimed in claim 83 [or 84], wherein said silica fiber is a dispersion compensating fiber.

88. (Amended) An optical fiber amplifier comprising:

a first laser source; and

an Erbium-doped tellurite fiber pumped with [the] a pump light emitted from said first laser source;

wherein the wavelength of the pump light emitted from said first laser source is 1410-1440nm.

90. (Amended) The optical fiber amplifier as claimed in claim 88, further comprising a second laser source for pumping said Erbium-doped tellurite fiber, wherein the wavelength of [the] a pump light emitted from said second laser source is 1450-1500nm.

93. (Amended) An optical communication system including at least one transmission line segment comprising:

(a) a repeater incorporating a first laser source and a second laser source[s], and a tellurite fiber pumped with [the] a pump light emitted from said first laser source; and

(b) a unit transmission line having a silica fiber pumped with [the] a pump light emitted from said second laser source.

95. (Amended) The optical communication system as claimed in claim 93 [or 94], wherein said tellurite fiber is a dispersion compensating fiber.

96. (Amended) An optical communication system including at least one transmission line segment comprising:

(a) a repeater incorporating a first, a second and a [to] third laser sources and a fifth [to] and a sixth laser sources, a first tellurite fiber pumped with [the] pump light emitted from said first and second laser sources, a first silica fiber pumped with [the] pump light emitted from said third laser source, and a second tellurite fiber pumped with [the] pump light emitted from said fifth and sixth laser sources; and

(b) a unit transmission line having a fourth laser source and a second silica fiber pumped with [the] pump light emitted from said fourth laser source;

wherein said first, second, third and [to] fourth laser sources emit pump light beams of wavelengths different from one another.

101. (Amended) The optical fiber amplifier as claimed in claim [97 or 98] 96, further comprising a seventh laser source for pumping said second silica fiber, wherein [the]

pump light beams emitted from said seventh and third laser sources have the same wavelength.

102. (Amended) The optical fiber amplifier as claimed in [one of claims 96-100] claim 96, wherein said first tellurite fiber, first silica fiber and second tellurite fiber are connected in series in this order in said repeater.

103. (Amended) An optical communication system including at least one transmission line segment comprising:

(a) a repeater incorporating first, second and [to] third laser sources, a first tellurite fiber pumped with [the] pump light emitted from said first and second laser sources, and a first silica fiber pumped with [the] pump light emitted from said third laser source; and

(b) a unit transmission line having a fourth laser source and a second silica fiber pumped with [the] pump light emitted from said fourth laser source;

wherein said first, second, third and [to] fourth laser sources emit pump light beams of wavelengths different from one another.

106. (Amended) The optical communication system as claimed in claim [104 or 105] 103, further comprising a fifth laser source for pumping said second silica fiber, wherein [the] pump light beams emitted from said fifth and third laser sources have the same wavelength.

107. (Amended) The optical communication system as claimed in [one of claims 103-105] claim 103, wherein said repeater further comprises a second tellurite fiber, and said first tellurite fiber, first silica fiber and second tellurite fiber are connected in series in this order in said repeater.